



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,484	12/12/2005	Claudio Gini	G124-223 US	3110
21706 7590 09/05/2008 NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100				
EXAMINER				
FREEMAN, JOHN D				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
09/05/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/560,484

**Applicant(s)**

GINI, CLAUDIO

**Examiner**

John Freeman

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 49-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 49-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 58-59 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Both claims depend on claim 49, which limits the adhesive layers to "a *copolymer* of ethylene modified with maleic anhydride" (emphasis added). Claim 58-59 each disclose "LLDPE modified with maleic anhydride." LLDPE is not a copolymer as required by claim 49.
2. Claim 63 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Independent claim 49 limits adhesive layer B one of a group consisting of a terionomer, a copolymer of ethylene modified with maleic anhydride, and an EVA/EMA copolymer. Dependent claim 63, however, attempts to limit B to one of a group that includes "ethylene copolymers" which is broader than any of the polymers identified in claim 49.
3. Claims 49-67 objected to because of the following informalities:
  - Claim 49 contains a typographical error: "of" is misspelled "fo" in line 2 of the claim
  - Claim 49 contains a colon out of place. Line 8 of the claim (starting from the top of p4 of the claims), recites "consisting: of PA 6," but should read "consisting of: PA 6" instead.
  - Claim 49 contains a typographical error. Line 9 of the claim (starting from the top of p4 of the claims), recites "wherein one of the barrier layers...are outer layers." The claim should read "wherein one of the barrier layers...*is an outer layer*" instead.
  - Claims 52-60 are written in the following format: layer A comprises..., layer B *comprising*..., layer C *comprising*..., etc. The examiner requests Applicant edits the claims to replace the gerund form, comprising, with the conjugated form, comprises, for consistency.
  - Claim 52 contains a typographical error: "of" is not needed in line 3 of the claim.
  - Claim 53 contains a typographical error: "of" is not needed in line 6 of the claim.

Art Unit: 1794

- Claim 57 contains a typographical error: a space should exist between "PA" and "6/66" in line 3 of the claim.
  - Claim 61 contains a typographical error: a space should exist between "PA" and "6/66" in line 3 of the claim.
  - Claim 62 contains an unnecessary colon in line 1 of the claim.
  - Claim 62 contains a typographical error: a space should exist between "PA" and "6/66" in line 3 of the claim.
  - Claim 62 contains a typographical error: "of" is not needed in line 6 of the claim.
  - Claim 62 contains an unnecessary colon in line 1 of the claim after the word "wherein".
  - Claim 62 contains a colon out of place. Line 6 of the claim, recites "consisting of: ethylene copolymers," but should read "consisting of: ethylene copolymers" instead.
  - Claim 64 contains a typographical error: a space should exist between "PA" and "6/66" in line 5 of the claim.
  - Claim 67 contains a typographical error: a space should exist between "PA" and "6/66" in line 9 of the claim.
4. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Shepard et al. (EP 0800915) taken in view of the evidence given in DUPONT Surlyn.
7. Shepard et al. (hereafter Shepard) disclose a shrink film useful for packaging (col 4 ln 33-34). Fig. 2, reproduced below by the examiner, represents one embodiment of the film, which Shepard discusses on column 11 line 24 through column 12 line 10.

Art Unit: 1794

25	Nylon
23	Adhesive
21	Nylon
20	Adhesive
22	Nylon
24	Adhesive
26	Sealant

8. The nylon layers are amorphous (col 11 ln 28), but may be blended with other polyamides such as nylon 6, nylon 6,6, nylon 6,12, nylon 12 (col 9 ln 20-23). The adhesives may be anhydride-modified polyolefin, or EVA-based (ethylene vinyl acetate) (col 5 ln 36). The sealant layer may be LLDPE or an ionomer (col 12 ln 8-9). The examiner notes Shepard discloses the use of a SURLYN ionomer (col 12 ln 52-53). Such ionomers contain zinc and/or sodium ions as evidenced by the included trade material from the DUPONT company.

9. Using the first embodiment of Shepard's film (col 7 ln 45+) as a guide to determine the appropriate thickness percentage of each layer, would result in layers with thicknesses as claimed by Applicant. For example, each nylon layer constitutes 5-20% of the overall thickness (col 8 ln 18), each adhesive layer constitutes either 5-20% or 10-40% of the overall thickness (col 9 ln 41-44), and the sealant layer constitutes 15-40% of the overall thickness (col 11 ln 11).

10. As Shepard remains silent with regard to whether or not the polymers are crosslinked, the examiner takes the position that Shepard intends for the polymers to remain uncrosslinked.

11. The examiner takes the position that Shepard's film would satisfy Applicant's Young's modulus and moment force limitations found in claims 50-51, as Shepard's film mirrors Applicant's film in structure and composition.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 59 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al. (EP 0800915).

14. Shepard discloses a multilayer structure as previously described.

15. Regarding claim 59:

16. Shepard discloses the amorphous nylon layers may be blended with any other nylon (col 9 ln 16-23). In the discussion of a nylon layer, Shepard specifically discloses the use of nylon 6,66 as one of various nylons (col 10 ln 25-32).

17. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use nylon 6,66 in the blend with amorphous polyamide because Shepard provides motivation to use any type of nylon, and then specifically identifies nylon 6,66 as a possible nylon.

18. Regarding claim 63:

19. Shepard is silent with regard to the specific thicknesses claimed.

20. The ranges disclosed by Shepard overlap, however, with those claimed by Applicant. As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

21. At the time of the invention, it would have been obvious to one of ordinary skill in the art to create layers with the claimed thicknesses through routine experimentation of Shepard's invention.

***Claim Rejections - 35 USC § 112***

22. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

23. Claims 49-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

24. Claim 49 recites "a second adhesive layer D...comprising an adhesive polymer selected from the group consisting of: a *terionomers*" (emphasis added). The use of the singular "a" in front of the plural "*terionomers*" renders the claim indefinite. It is unclear whether the adhesive can be a singular *terionomer* or whether it must comprises multiple *terionomers*. The same phrasing appears within the same claim in discussion of second barrier layer E.

25. Claim 49 recites the limitation "wherein one of the barrier layers E and G are outer layers..."

Given that Applicant begins the claim with "starting from a layer that, in use, is in contact with foodstuffs..." and then proceeds to list layers A through G in that order, the claims appear to describe a specific sequence of the layers. However, this conflicts with the limitation that layer E can be an outer layer. It appears that only G can be an outer layer, while E is an inner layer between layers D and F.

26. Claim 50 recites "said outer layers comprise non-cross-linked thermoplastic polymers," but it is unclear whether the non-crosslinked thermoplastic polymers refer to the specific polymers already recited in claim 49, or whether these are additional non-crosslinked polymers contained in the outer layers.

27. Claim 50 recites the limitation "the material" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is not clear what is meant by "the material" or what it encompasses.

28. Claims 54 and 66 limit layer C as "comprising a mixture of polyamides PA 6/66 and amorphous PA blended with a *terionomer*." It is unclear what the mixture contains. The mixture could comprise (i) PA 6/66, and (ii) amorphous PA blended with a *terionomer*; or (i) PA 6/66 and amorphous PA that is blended with (ii) *terionomer*.

29. Claims 55 improperly describes the polymers by using "selected from" terminology to described only one element (e.g. "[layer C] consists of a polyamide polymer selected from among polyamides PA 6/66"). It is unclear what Applicant intends by such phrasing.

***Response to Arguments***

30. Applicant's arguments filed 23 June 2008 have been fully considered but they are not persuasive.

31. The examiner appreciates Applicant's efforts to address the examiner's objections. New claim objections have been added.

32. Applicant's traversal of the examiner's rejection under 35 USC 112, second paragraph over the use of "neutral plane" has persuaded the examiner to remove the rejection.

33. New rejections under 35 USC 112, second paragraph remain.

34. Applicant argues that "Shepard does not disclose or suggest the relative positions of the layers with higher and lower Young's modulus" and that "Shepard does not mention young's modulus at all" and still further that "nowhere in the reference is the neutral plane mentioned" (p14). The examiner notes the layers of Shepard comprise the same polymers as Applicant's claimed invention. Therefore, the examiner takes the position that the Young's modulus of each layer would correspond to that described by Applicant. Since the layers are positioned in the same way as described by Applicant's claimed invention, the examiner further takes the position that Shepard's film satisfies the requirements of claim 51. Applicant makes further arguments that Shepard does not disclose the same motivation as Applicant for the sequence of layers (p18). Again, the examiner believes Shepard's film inherently satisfies the requirements identified by Applicant.

35. Applicant argues the thicknesses of the various layers of Shepard do not satisfy the requirements of the present claims. When the examiner wrote "the nylon layers constitute 5-20%...of the overall thickness" of the films (see previous Office Action, p3, paragraph 8), it is clear, based on the portion of Shepard pointed to by the examiner, that each nylon layer constitutes 5-20% of the overall thickness. The above rejection has been amended to reflect this fact for clarity.



Art Unit: 1794

36. Applicant's arguments regarding Ramesh are found to be persuasive. Specifically, the existence of high modulus layer 26 next to another high modulus layer 32, renders the use of Ramesh untenable as a reference. The rejections made therefrom have been removed.

### ***Conclusion***

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shah ('419) discloses multilayer shrink film comprising nylon layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Freeman  
Examiner  
Art Unit 1794

/John Freeman/  
Examiner, Art Unit 1794

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794